

IN THE CLAIMS:

All of the pending claims 1, 3-5, and 7-12 are set forth below. The status of each claim is indicated with one of (original), (currently amended), or (cancelled). Please CANCEL claims 2, 6, and 13-18 without prejudice or disclaimer. Please AMEND claims 1, 3, 5, and 7 in accordance with the following:

1. (currently amended) An optical transmission device ~~for performing transmission of an optical signal~~, comprising:

a WDM port as a port for transmission and reception of a wavelength-multiplexed signal; and

~~a wavelength multiplex/demultiplex unit which has a loss characteristic compensating for a wavelength-dependent loss characteristic of an optical transmission line, performs at least one of wavelength demultiplexing of a signal received through said WDM port and wavelength multiplexing for outputting a signal through the WDM port, and suppresses differences among different channels in loss caused by transmission of a wavelength-multiplexed signal so as to equalize loss levels in the different channels in the wavelength-multiplexed signal;~~

a wavelength multiplex/demultiplex unit, the wavelength multiplex/demultiplex unit including a plurality of optical filters which are provided in correspondence with a plurality of wavelengths, are daisy-chain connected, and have a loss characteristic weighted at the plurality of wavelengths in correspondence with a wavelength-dependent loss characteristic, and each of the plurality of optical filters has a function of a band-pass filter and an identical insertion loss.

2. (cancelled)

3. (currently amended) The optical transmission device according to claim-2_1, wherein when a curve of said wavelength-dependent loss characteristic has an extreme value and shows decrease in loss with increase in wavelength in a first wavelength range in which the gradient of the curve is negative and increase in loss with increase in wavelength in a second wavelength range in which the gradient of the curve is positive,

said plurality of optical filters are arranged in such a manner that signals to be demultiplexed first pass through ones of said plurality of optical filters corresponding to wavelengths in one of said first and second wavelength ranges in decreasing order of said wavelength-dependent loss characteristic, and then through other ones of said plurality of optical filters corresponding to wavelengths in another of said first and second wavelength ranges in

decreasing order of said wavelength-dependent loss characteristic.

4. (original) The optical transmission device according to claim 1, wherein said wavelength multiplex/demultiplex unit further comprises an optical filter through which separation or insertion of a signal for maintenance control is performed.

5. (currently amended) An optical transmission system ~~for performing transmission of an optical signal~~, comprising:

an optical transmission line as a transmission medium of a wavelength-multiplexed signal;

a first optical transmission device being connected to an end of said optical transmission line, and comprising a first wavelength multiplex/demultiplex unit ~~which has a loss characteristic compensating for a wavelength-dependent loss characteristic of the optical transmission line, and performs at least one of wavelength demultiplexing of an optical signal and wavelength multiplexing of optical signals~~ comprises a plurality of optical filters which are provided in correspondence with a plurality of wavelengths, are daisy-chain connected, and have a loss characteristic weighted at the plurality of wavelengths in correspondence with a wavelength-dependent loss characteristic, and each of the plurality of optical filters has a function of a band-pass filter and an identical insertion loss; and

a second optical transmission device being connected to another end of said optical transmission line, and comprising a second wavelength multiplex/demultiplex unit ~~which has a loss characteristic compensating for said wavelength-dependent loss characteristic of the optical transmission line, and performs at least one of wavelength demultiplexing of an optical signal and wavelength multiplexing of optical signals~~ including a plurality of optical filters which are provided in correspondence with a plurality of wavelengths, are daisy-chain connected, and have a loss characteristic weighted at the plurality of wavelengths in correspondence with said wavelength-dependent loss characteristic, and each of the plurality of optical filters has a function of a band-pass filter and an identical insertion loss.

6. (cancelled)

7. (currently amended) The optical transmission system according to claim ~~6~~ 5, wherein when a curve of ~~when~~ said wavelength-dependent loss characteristic has an extreme value and shows decrease in loss with increase in wavelength in a first wavelength range in

which the gradient of the curve is negative and increase in loss with increase in wavelength in a second wavelength range in which the gradient of the curve is positive,

said plurality of optical filters in each of said first and second wavelength multiplex/demultiplex units are arranged in such a manner that signals to be demultiplexed first pass through ones of said plurality of optical filters corresponding to a plurality of wavelengths in one of said first and second wavelength ranges in decreasing order of said wavelength-dependent loss characteristic, and then through other ones of said plurality of optical filters corresponding to a plurality of wavelengths in another of said first and second wavelength ranges in decreasing order of said wavelength-dependent loss characteristic.

8. (original) The optical transmission system according to claim 5, wherein each of said first and second wavelength multiplex/demultiplex units further comprises an optical filter through which separation or insertion of a signal for maintenance control is performed.

9. (original) The optical transmission system according to claim 5, wherein when said first wavelength multiplex/demultiplex unit performs wavelength multiplexing, and said second wavelength multiplex/demultiplex unit performs wavelength demultiplexing, each of said first and second wavelength multiplex/demultiplex units has a loss characteristic which compensates for half of said wavelength-dependent loss characteristic so that differences among different channels in loss caused by transmission of a wavelength-multiplexed signal are suppressed, and loss levels in the different channels in the wavelength-multiplexed signal are equalized.

10. (original) The optical transmission system according to claim 5, wherein when said first wavelength multiplex/demultiplex unit performs wavelength multiplexing, and said second wavelength multiplex/demultiplex unit performs wavelength demultiplexing, said first wavelength multiplex/demultiplex unit has a first loss characteristic which compensates for a first wavelength-dependent loss characteristic of a first section of the optical transmission line between said first optical transmission device and a midpoint of the optical transmission line, and said second wavelength multiplex/demultiplex unit has a second loss characteristic which compensates for a second wavelength-dependent loss characteristic of a second section of the optical transmission line between said midpoint and said second optical transmission device, so that differences among different channels in loss caused by transmission of a wavelength-multiplexed signal are suppressed, and loss levels in the different channels in the wavelength-

multiplexed signal are equalized.

11. (original) The optical transmission system according to claim 5, wherein when said first wavelength multiplex/demultiplex unit performs wavelength multiplexing, and said second wavelength multiplex/demultiplex unit performs wavelength demultiplexing, said first wavelength multiplex/demultiplex unit has a loss characteristic which compensates for said wavelength-dependent loss characteristic of the optical transmission line, and said second wavelength multiplex/demultiplex unit has a flat loss characteristic which shows identical loss levels at all wavelengths used in transmission, so that differences among different channels in loss caused by transmission of a wavelength-multiplexed signal are suppressed, and loss levels in the different channels in the wavelength-multiplexed signal are equalized.

12. (original) The optical transmission system according to claim 5, wherein when said first wavelength multiplex/demultiplex unit performs wavelength multiplexing, and said second wavelength multiplex/demultiplex unit performs wavelength demultiplexing, said first wavelength multiplex/demultiplex unit has a flat loss characteristic which shows identical loss levels at all wavelengths used in transmission, and said second wavelength multiplex/demultiplex unit has a loss characteristic which compensates for said wavelength-dependent loss characteristic of the optical transmission line, so that differences among different channels in loss caused by transmission of a wavelength-multiplexed signal are suppressed, and loss levels in the different channels in the wavelength-multiplexed signal are equalized.

13-18. (cancelled)